

ABSTRACT OF THE DISCLOSURE

A loudspeaker motor structure uses variable geometry to change the effective magnetic field acting on the voice coil of the motor structure. A magnet generates the magnetic field, which couples into a front plate, a back plate, and a pole piece. In one loudspeaker, the front plate and the pole piece have notches and slots. Rotating the pole piece relative to the front plate varies the width of the gap between the pole piece and the front plate, and the effective magnetic field in the gap. In another loudspeaker, the pole piece moves up and down in relation to the back plate. This movement varies the magnetic coupling between the pole piece and the back plate and, consequently, the effective magnetic field in the gap between the pole piece and the front plate. Variations in the effective magnetic field in the gap result in variations of the loudspeaker parameters.